

REMARKS

Applicant has carefully reviewed and considered the Final Office Action mailed on January 11, 2007, and the references cited therewith.

Applicants respectfully request entry of this Amendment prior to examination of the above-referenced application pursuant to the accompanying Request for Continuing Examination. The above amendments are intended to place the above-captioned application in condition for allowance. No claims are amended, no claims are canceled, and claims 35-37 are added; as a result, claims 1, and 4-37 are now pending in this application.

Information Disclosure Statement

An information disclosure statement is being concurrently filed with this Amendment. The items of information listed on the enclosed Forms PTO/SB/08A and 08B (formerly PTO-1449) are brought to the attention of the Examiner to be made of record in the above-captioned patent application.

The items of information listed were cited in an office action by the Japanese Patent in a related case and may be relevant in the above-captioned patent application.

In accordance with 37 C.F.R. § 1.98(a)(2), an English translation of each foreign abstract for the patent listed on the enclosed Forms PTO/SB/08A and 08B (formerly PTO-1449) is enclosed with the foreign-language document.

§ 112 Rejection of the Claims

Claims 1, 4-34 were rejected under 35 USC § 112, first paragraph, as failing to comply with the written description requirement. Claim 1 was rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

With regard to the 112, first paragraph, rejection of Applicant's claims 1 and 4-34, Applicant submits that description sufficient to support the recited elements of

claims 1, and 4 - 34 is provided in the application as originally filed. Particular sections of the specification of the present application describe, and particular figures illustrate, that a configurable H-bridge of the present disclosure can take on alternative configurations resulting from implementation of executable instructions. As shown in Figures 1A and 1B and Figure 2, and described in the accompanying description in the specification, the alternative configurations are interchangeable configurations of the same configurable H-bridge circuit.

More specifically, element 306 of Figure 3 recites the choice, “Motor drive circuit implementation?” and illustrates the choices as being “Yes” or “No” for the configurable H-bridge circuit. Selection of the Yes alternative in Figure 3 results in element 308 that recites, “Configure an H-bridge circuit control according to the indication that the H-bridge circuit is to be implemented to drive a motor”. As an alternative for the same configurable H-bridge circuit, selection of the No alternative results in element 314 that recites, “Configure an H-bridge circuit control according to the indication that the H-bridge circuit is to be implemented as discrete switches”.

Additionally, element 408 of Figure 4 recites the choice, “Discrete switches implementation?” and illustrates the choices as being “Yes” or “No” for the specified third H-bridge circuit of a multiple H-bridge circuit. Selection of the No alternative results in element 410 that recites, “Configure the third H-bridge circuit of the multiple H-bridge circuit as a motor circuit drive”.

As an alternative for the third H-bridge circuit, selection of the Yes alternative results in element 414 that recites, “Configure the third H-bridge circuit of the multiple H-bridge circuit as discrete switches”. As a consequence of configuring the third H-bridge circuit as discrete switches, element 416 recites, “Couple a switch of the third H-bridge circuit as a component switch”.

As such, it is apparent to one of ordinary skill in the relevant art that, by implementation of executable instructions, a single configurable H-bridge circuit can be configured in alternative configurations as a motor drive circuit, as H-bridge circuits are conventionally utilized, or as discrete switches that can be coupled to an “electrically-

powered component” (which can be independent of the locale of the H-bridge circuit), as disclosed in the present application and recited in independent claims 1, 4, 17, 29, and 31. Being alternative configurations of the same circuit is recited in the claims; for example, independent claim 1, as previously presented, recites “a first configuration of the configurable H-bridge circuit” and “a second configuration of the configurable H-bridge circuit”. By preceding each configuration with “the”, antecedent basis requirements necessitate that the first and second alternative configurations are taken on by the same configurable H-bridge circuit.

As conceded in the Response to Arguments section of the January 11, 2007, Final Office Action, “An H-bridge functions by opening and closing switches”. As such, elements of claims reciting that mode of operation are inherently supported by the definition of an H-bridge circuit as understood by one of ordinary skill in the relevant art, which does not necessitate detailed description in the specification.

Hence, in light of the description of the alternative configurations provided in the specification and figures, as discussed above, Applicant submits that elements of claims reciting implementation of such alternative configurations by opening and closing switches do not require detailed supporting description because implementing alternative patterns of switch opening and closing for driving a motor in one direction or the other direction is an inherent characteristic of an H-bridge circuit, as previously appreciated by one of ordinary skill in the relevant art. For example, Applicant submits that the meaning of elements such as “wherein each are coupled by closing switches to form a discrete switch”, as recited in independent claim 1, and “alternative closing of switches”, as recited in independent claims 4, 10, 17, 23, 29, and 31, is appreciated by one of ordinary skill in the relevant art based upon the inherent characteristics of previously-known H-bridge circuits when considered in light of the accompanying description and figures in the present disclosure.

Additionally, it can be appreciated by one of ordinary skill in the relevant art that completing an operable H-bridge circuit can involve a first component of a switch and a second component of a switch, which can be represented by a high side switch and a

low side switch, being closed to form a larger switch created from the first and second components. As appreciated by one of ordinary skill in the relevant art, no current flows to drive a motor in a desired direction in previously-known H-bridge circuits unless a high side switch on one side of the H-bridge and a low side switch on the other side of the H-bridge are closed, which can be considered a first component and a second component of a larger switch controlling operation of the motor.

Hence, in light of the description of the alternative configurations provided in the specification and figures, as discussed above, Applicant submits that elements of claims reciting coupling of a high or low side switch as a first or second component of a switch do not require detailed supporting description because using a high side switch and a low side switch as two components of a larger switch for driving a motor in one direction or the other direction is an inherent characteristic of an H-bridge circuit, as previously appreciated by one of ordinary skill in the relevant art. For example, Applicant submits that the meaning of elements such as “one high switch is coupled as a first component of a switch” and “one low switch is coupled as a second component of a switch”, both recited in independent claim 1, is appreciated by one of ordinary skill in the relevant art based upon the inherent characteristics of previously-known H-bridge circuits when considered in light of the accompanying description and figures in the present disclosure.

Moreover, Applicant submits that referring to Figures 1A, 1B, 2, 3, and 4 while reading the accompanying description in the specification will convey to one of ordinary skill in the relevant art how alternative closing of switches in a configurable H-bridge circuit can accomplish the results recited in the claims for “a second configuration” of the same configurable H-bridge circuit that in “a first configuration” can drive a motor. For example, in independent claim 1, the meaning of, “wherein each are coupled by closing switches to form a discrete switch where one high switch is coupled as a first component of a switch supplying electricity to an electrically-powered component and one low switch is coupled as a second component of a switch supplying electricity to a different electrically-powered component”, will be appreciated by one of ordinary skill

in the relevant art by examination of Figure 1A and the elements associated with H-bridge circuit configuration 202(3) in Figure 2 in light of the accompanying description in the specification of the present disclosure.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the 112, first paragraph, rejection of claims 1, and 4-34.

With regard to the 112, second paragraph, rejection of Applicant's independent claim 1, the January 11, 2007 Final Office Action states, "It is unclear what "each" refers to in line 9 of the claim." The term "each" in line 9 of independent claim 1, as previously presented, is immediately preceded by, "a second configuration of the configurable H-bridge circuit in which the high switches serve as first components and the low switches serve as second components". Applicant submits that, when analyzed logically or grammatically, "each" only can be referring to "the high switches serve as first components and the low switches serve as second components", and, as such, "each" has adequate antecedent basis.

The Final Office Action further stated, "It is unclear how one high side switch is coupled as a first component of a switch, when the high side switch is the switch." A similar statement is made about it being unclear as to how a low side switch can be a second component of a switch. Applicant dealt with this issue above with regard to the 112, first paragraph, rejection.

To reiterate, in light of the description of the alternative configurations provided in the specification and figures, Applicant submits that elements of independent claim 1 reciting "one high switch is coupled as a first component of a switch" and "one low switch is coupled as a second component of a switch" are appreciated by one of ordinary skill in the relevant art because using a high side switch and a low side switch as two components of a larger switch for driving a motor in one direction or the other direction is a previously inherent characteristic of an H-bridge circuit.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the 112, second paragraph, rejection of independent claim 1, as previously presented.

§ 103 Rejection of the Claims

Claims 1, 3-7, 17-22, 29, 30 were rejected under 35 USC § 103(a) as being unpatentable over Hella (DE 4440064) in view of applicants' admitted prior art.

Claim 1 was rejected under 35 USC § 103(a) as being unpatentable over Hella (EP 0833437) in view of applicants' admitted prior art.

Claims 8, 9 were rejected under 35 USC § 103(a) as being unpatentable over Hella 064 and applicants' admitted prior art as applied to claim 4 above, and further in view of Hella (EP 0833437).

Claims 10, 14, 15, 23-25 and 31-34 were rejected under 35 USC § 103(a) as being unpatentable over Barrus et al (U.S. Patent No. 6,082,914) in view of Hella 437 and Applicants' admitted prior art.

Claims 29, 30 were rejected under 35 USC § 103(a) as being unpatentable over Barrus et al (U.S. Patent No. 6,082,914) in view of Hella 437.

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With regard to the 35 USC § 103(a) rejection of independent claims 1, 4, 17 and 29 as being unpatentable over Hella (DE 4440064) in view of applicants' allegedly admitted prior art, the Hella '064 reference was cited, referring to Figs. 1-3, as describing a number of elements of independent claim 1 of the present disclosure. Applicant does not admit that the Hella '064 reference supports the description suggested in the Final Office Action because the specification, figures, and claims of the Hella '064 reference are written in a manner that liberally intermixes English and German words, phrases, grammar, and syntax in such a manner as to make the document incomprehensible, or open to multiple interpretations, to a reader accustomed to using, and reading documents composed in, the English language.

As far as Applicant can determine, by showing no particular circuitry configuration in Figs. 1 or 2 with regard to driving the motor, and by showing every combination of T1, T2, T3, and T4 in Fig. 3 except T1 with T2, or T3 with T4, Hella '064 appears to describe a conventional H-bridge circuit. In addition, by stating, "One

or more bridge circuits (B1, B2, B3, B4, BS) are each assigned a linking network (VN) which drives the load switch of the bridge circuit”, the Hella ‘064 Abstract appears to describe a network that drives the load switch of the bridge circuit rather than an electrically-powered component to which electricity is supplied by a particular configuration of closed switches in an H-bridge circuit.

Hella ‘064 appears to have been interpreted to describe particular elements of Applicant’s independent claim 1 as follows: “each are coupled (T1, T2, T3, T4 are coupled) by closing switches to form a discrete where one high switch (T1) is coupled as a first component switch to a component (T1 of X to 2Y) and the low switch is coupled to a different component (T4 of Y coupled to 2x)”. (Section 7 of the January 11, 2006, Final Office Action). Applicant does not admit the accuracy of such an interpretation of the jumbled combination of English and German in the Hella ‘064 reference. Consistent with difficulty in clearly discerning the meaning of the cited reference, it is further stated in section 7 that “It is unclear if Hella teaches the switches coupled together to independently drive a motor.” By so stating, the Final Office Action has admitted that Hella ‘064 does not intelligibly teach to one of ordinary skill in the relevant art a single configurable H-bridge circuit having a first configuration to independently drive a motor and a second configuration to supply electricity to a different electrically-powered component.

With regard to Applicant’s allegedly admitted prior art, the Final Office Action stated that Applicant’s Background section “teaches that it is well known in the art that an H-bridge is configured to independently drive a motor”. However, the Background section of the specification recites, “The motor control ASIC is implemented with an H-bridge circuit structure that enables a microprocessor or controller to independently control each motor in an imaging device.” (Page 1, paragraph 0003).

As such, the recited statement from the Background section of Applicant’s application does not disclose that every H-bridge circuit is configured to independently drive a motor. Rather, the Background section discloses that a motor control ASIC implemented with an H-bridge circuit structure enables a microprocessor or controller to

independently control each motor. Stating that a motor control ASIC can use “an H-bridge circuit structure” to control each motor does not connote that all H-bridge circuits control motors, either individually or as part of a circuit structure, especially in a situation where the H-bridge circuit is not controlled by a motor control ASIC.

Paragraph 0012 on page 5 of the present application recites, “Fig. 2 illustrates an exemplary application-specific integrated circuit (ASIC) in which configurable H-bridge circuits 202(1), 202(2), and 202(3) can each be configured and implemented as discrete switches or as a motor drive circuit.” As such, an ASIC as disclosed in the present application is more than just “a motor control ASIC”.

Hence, neither Hella ‘064 nor Applicant’s allegedly admitted prior art shows a first configuration of the configurable H-bridge circuit with high switches and low switches connected together and coupled by closing switches to independently drive a motor as a first H-bridge circuit configuration, and a second configuration of the configurable H-bridge circuit in which the high switches serve as first components and the low switches serve as second components, wherein each are coupled by closing switches to form a discrete switch where one high switch is coupled as a first component of a switch supplying electricity to an electrically-powered component and one low switch is coupled as a second component of a switch supplying electricity to a different electrically-powered component, the second configuration being different than the first configuration.

In contrast, Applicant’s independent claim 1, as previously presented, recites:

a first configuration of the configurable H-bridge circuit with high switches and low switches connected together and coupled by closing switches to independently drive a motor as a first H-bridge circuit configuration; and

a second configuration of the configurable H-bridge circuit in which the high switches serve as first components and the low switches serve as second components, wherein each are coupled by closing switches to form a discrete switch where one high switch is coupled as a

first component of a switch supplying electricity to an electrically-powered component and one low switch is coupled as a second component of a switch supplying electricity to a different electrically-powered component, the second configuration being different than the first configuration.

Independent claim 4, as previously presented, recites:

a configurable first H-bridge circuit that by alternative closing of switches includes a first configuration as a first motor drive circuit to drive a first motor, and includes a second configuration as discrete switches, each of the discrete switches configured to be coupled to supply electricity to independent electrically-powered components;

Independent claim 17, as previously presented, recites:

coupling the configurable H-bridge circuit to drive a motor in an event that the configurable H-bridge circuit is implemented as the motor drive circuit; and

coupling a discrete switch of the configurable H-bridge circuit as a component switch in an event that the configurable H-bridge circuit is implemented as the discrete switches to supply electricity to electrically-powered components.

In addition, independent claim 29, as previously presented, recites:

configuring the configurable H-bridge circuit in a first configuration to drive a motor in an event that the configurable H-bridge circuit is to be implemented as the motor drive circuit; and

configuring the configurable H-bridge circuit in a second configuration as the discrete switches in an event that a switch of the configurable H-bridge circuit is to be implemented as a component

switch to supply electricity to independent electrically-powered components.

As such, Applicant respectfully submits that each and every element and limitation of independent claims 1, 4, 17, and 29, as previously presented, is not described, taught, or suggested in the Hella '064 reference and Applicant's allegedly admitted prior art, either individually or in combination. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the 103 rejection of independent claims 1, 4, 17, and 29, as previously presented, as well as those claims that depend therefrom. Dependent claim 3 has previously been cancelled.

With regard to the 35 USC § 103(a) rejection of independent claim 1 as being unpatentable over Hella (EP 0833437) in view of applicants' allegedly admitted prior art, the Hella '437 reference appears to describe, "The semiconductor driver circuit . element has individual quarter circuit bridge drivers, with a semiconductor chip (12) provided with a number of electronic switches (24, 26)." (Abstract). Hella '437 does not show a first configuration of the configurable H-bridge circuit with high switches and low switches connected together and coupled by closing switches to independently drive a motor as a first H-bridge circuit configuration and a second configuration of the configurable H-bridge circuit in which the high switches serve as first components and the low switches serve as second components, wherein each are coupled by closing switches to form a discrete switch where one high switch is coupled as a first component of a switch supplying electricity to an electrically-powered component and one low switch is coupled as a second component of a switch supplying electricity to a different electrically-powered component, the second configuration being different than the first configuration.

In contrast, Applicant's independent claim 1, as previously presented, recites:
a first configuration of the configurable H-bridge circuit with
high switches and low switches connected together and coupled by

closing switches to independently drive a motor as a first H-bridge circuit configuration; and

a second configuration of the configurable H-bridge circuit in which the high switches serve as first components and the low switches serve as second components, wherein each are coupled by closing switches to form a discrete switch where one high switch is coupled as a first component of a switch supplying electricity to an electrically-powered component and one low switch is coupled as a second component of a switch supplying electricity to a different electrically-powered component, the second configuration being different than the first configuration.

Although the single figure of the Hella '437 reference appears to show three motors driven by what appear to be H-bridge circuits, one side of each H-bridge circuit for each motor is shared with another motor. This configuration differs from "coupled by closing switches to independently drive a motor as a first H-bridge circuit configuration", as recited in independent claim 1, as previously presented. Moreover, it appears that the circuitry used for components 52 and 54 in the Hella '437 figure is not arranged in an H-bridge configuration as such, nor does it form a portion of the H-bridges driving the three motors, which differs from two electrically-powered components being "coupled by closing switches" of "a second configuration of the configurable H-bridge circuit", as recited in independent claim 1, as previously presented. By reciting "the configurable H-bridge circuit" for the first and second configurations, the same H-bridge circuit is intended for each configuration. Hence, Applicant submits that the Hella '437 reference does not describe, teach, or suggest each and every element of the Applicant's independent claim 1.

The embodiment of the present disclosure claimed in independent claim 1, as previously presented, differs from the Hella '437 reference even in light of the Final Office Action's prior art contentions. The Final Office Action cited the Background

section of the application and stated that “Applicant’s prior art teaches that it is well-known in the art that an H-bridge is configured to independently drive a motor” (Section 8 of the January 11, 2007, Final Office Action). Applicant does not admit that it was well-known in the art that an H-Bridge is configured to independently drive a motor. However, Applicant respectfully submits that even if it was well known to configure an H-bridge to independently drive a motor, this does not cure the deficiencies of the Hella ‘437 reference, as described above. That is, the above-cited Background section does not describe, teach, or suggest, “a first configuration of the configurable H-bridge circuit with high switches and low switches connected together and coupled by closing switches to independently drive a motor as a first H-bridge circuit configuration; and a second configuration of the configurable H-bridge circuit in which the high switches serve as first components and the low switches serve as second components” as recited in independent claim 1, as previously presented.

As such, Applicant respectfully submits that each and every element and limitation of independent claim 1, as previously presented, is not present in the Hella ‘437 reference or Applicant’s allegedly admitted prior art. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the 103(a) rejection of independent claim 1, as previously presented.

With regard to the 35 USC § 103(a) rejection of independent claims 10, 23 and 31 as being unpatentable over Barrus et al. (U.S. Patent No. 6,082,914) in view of Hella ‘437 and Applicants’ allegedly admitted prior art, in rejecting claim 10, as previously presented, the Final Office Action cites the Barrus ‘914 reference as describing, “a third H-bridge circuit (304) that includes a first configuration as a motor drive circuit to drive a third motor (186).” (Section 10 of the January 11, 2007, Final Office Action). In Fig. 4, Barrus ‘914 appears to show a “converter 272 is used to control the required current through the H bridge driver 274 for the D.C. motor 230.” (Col. 9, lines 12-14). Fig. 4 appears to show “an H bridge driver 296 connected to the motor 220”. (Col. 10, lines 45-46). Fig. 4 also appears to show “a stepper motor driver 304 is fundamentally an

electric circuit that applies power to the stepper motor 186.” (Col. 10, line 67, through col. 11, line 2). Hence, Barrus ‘914 appears to describe two H-bridge drivers (274, 296) and one driver (304) that “is fundamentally an electric circuit”, rather than “a third H-bridge circuit (304) that includes a first configuration as a motor drive circuit to drive a third motor (186).”

Additionally, as stated above with regard to the 102 rejection, the figure of the Hella ‘437 reference appears to show three motors driven by what appear to be H-bridge circuits; one side of each H-bridge circuit for each motor is shared with another motor. This configuration differs from, “a first configuration as a motor drive circuit to independently drive a third motor”, as recited in independent claim 10, as previously presented. Moreover, it appears that the circuitry used for components 52 and 54 in the Hella ‘437 figure is not arranged in an H-bridge configuration as such, nor does it form a portion of the H-bridges driving the three motors, which differ from, as recited in independent claim 10, as previously presented:

a configurable third H-bridge circuit that includes by alternative closing of switches a first configuration as a motor drive circuit to independently drive a third motor, and includes a second configuration as discrete switches that are each configured to be coupled to a different component as a component switch.

By reciting, “a configurable third H-bridge circuit that includes by alternative closing of switches” “a first configuration as a motor drive circuit” and “a second configuration as discrete switches”, the same H-bridge circuit is intended for each configuration.

With regard to Applicant’s allegedly admitted prior art, the Background section of the specification recites, “The motor control ASIC is implemented with an H-bridge circuit structure that enables a microprocessor or controller to independently control each motor in an imaging device.” (Page 1, paragraph 0003). The Background does not describe, “a configurable third H-bridge circuit that includes by alternative closing of switches a first configuration as a motor drive circuit to independently drive a third motor, and includes a second configuration as discrete switches that are each configured

to be coupled to a different component as a component switch” as recited by independent claim 10, as previously presented.

Independent claim 23, as previously presented, recites:

configuring by alternative closing of switches a configurable third H-bridge circuit of the multiple H-bridge circuit in a first configuration to independently drive a third motor in an event that the third H-bridge circuit is to be implemented as a motor drive circuit; and configuring the third H-bridge circuit in a second configuration as discrete switches that are each configured to be coupled to a different component in an event that a switch of the third H-bridge circuit is to be implemented as a component switch.

In addition, independent claim 31, as previously presented, recites:

means to configure by alternative closing of switches a configurable first H-bridge circuit in a first configuration as a motor drive circuit to independently drive a third motor; and

means to configure by alternative closing of switches the configurable first H-bridge circuit in a second configuration as discrete switches to supply electricity to independent electrically-powered components.

As such, Applicant respectfully submits that each and every element and limitation of independent claims 10, 23, and 31, as previously presented, is not described, taught, or suggested in the Barrus ‘914 and Hella ‘437 references, and Applicant’s allegedly admitted prior art, either individually or in combination. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the 103 rejection of independent claims 10, 23, and 31, as previously presented, as well as those claims that depend therefrom.

With regard to the 35 USC § 103(a) rejection of independent claim 29 as being unpatentable over Barrus et al. (U.S. Patent No. 6,082,914) in view of Hella '437, section 11 of the January 11, 2007 Final Office Action states “in view of Hella 437” in the heading for the rejection, but went on to describe material presented in the Hella '064 reference. Based thereon, Applicant will discuss Hella '064 in the following arguments instead of Hella '437.

In addition to the reasons provided above in the discussion regarding the § 103(a) rejection of claim 29, as previously presented, over Hella '064 setting forth the deficiencies of the Hella '064 reference; the Barrus '914 reference does not cure the deficiencies of Hella '064. That is, Barrus '914 appears to show in Fig. 4 that a “converter 272 is used to control the required current through the H bridge driver 274 for the D.C. motor 230.” (Col. 9, lines 12-14). Fig. 4 appears to show “an H bridge driver 296 connected to the motor 220”. (Col. 10, lines 45-46). Fig. 4 also appears to show “a stepper motor driver 304 is fundamentally an electric circuit that applies power to the stepper motor 186.” (Col. 10, line 67, through col. 11, line 2). As such, Barrus '914 appears to describe two H-bridge drivers (274, 296) and one driver (304) that “is fundamentally an electric circuit”, rather than “a third H-bridge circuit (304) that includes a first configuration as a motor drive circuit to drive a third motor (186)”, as stated in the Final Office Action.

Hence, neither the Hella '064 reference nor the Barrus reference, either individually or in combination, shows configuring a configurable H-bridge circuit in a first configuration to drive a motor in an event that the configurable H-bridge circuit is to be implemented as the motor drive circuit, and configuring the configurable H-bridge circuit in a second configuration as the discrete switches in an event that a switch of the configurable H-bridge circuit is to be implemented as a component switch to supply electricity to independent electrically-powered components.

In contrast, Applicant’s independent claim 29, as previously presented, recites:

configuring the configurable H-bridge circuit in a first configuration to drive a motor in an event that the configurable H-bridge circuit is to be implemented as the motor drive circuit; and

configuring the configurable H-bridge circuit in a second configuration as the discrete switches in an event that a switch of the configurable H-bridge circuit is to be implemented as a component switch to supply electricity to independent electrically-powered components.

As such, Applicant respectfully submits that each and every element and limitation of independent claim 29, as previously presented, is not described, taught, or suggested in the Barrus '914 and Hella '064 references, either individually or in combination. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the 103 rejection of independent claim 29, as previously presented, as well as claim 30 which depends therefrom.

With regard to the 35 USC § 103(a) rejection of dependent claims 11-13, 16, and 26-28 as being unpatentable over Barrus et al. (U.S. Patent No. 6,082,914) in view of Hella '437 and Applicants' allegedly prior art, further in view of Hella'064, while Applicant does not acquiesce with any particular rejections to these dependent claims, it is believed that these rejections are now moot in view of the remarks made above in connection with the rejections to the each independent claim from which these claims respectfully depend. These dependent claims include all of the limitations of the base claims, and any intervening claims. "If an independent claim is nonobvious under 35 USC § 103, then any claim depending therefrom is nonobvious." MPEP § 2143 *citing In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). Therefore, Applicant respectfully requests reconsideration and withdrawal of the 103 rejection of dependent claims 11-13, 16, and 26-28 as depending from allowable independent claims.

Conclusion

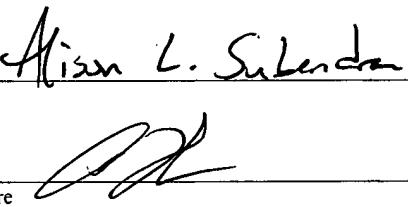
Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicants' attorney Gregg W. Wisdom at (360) 212-8052.

Fee calculation is provided on the enclosed Fee Transmittal form, along with payment for the additional claims added by the present amendment. At any time during the pendency of this application, please charge any additional fees or credit overpayment to the Deposit Account No. 08-2025.

CERTIFICATE UNDER 37 CFR §1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS RCE Commissioner for Patents, P.O. BOX 1450 Alexandria, VA 22313-1450, on this 9th day of March, 2007.

Name

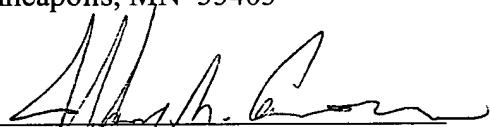
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